

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Original) An apparatus for fixing a bobbin to a printed circuit board for use in a transformer, around an upper portion of the bobbin being wound a coil, a lower portion of the bobbin being provided with a plurality of pins connected to an end of the coil and connected to the printed circuit board of an electronic product, the apparatus for fixing the bobbin to the printed circuit board comprising:

a receiving hole formed in the printed circuit board, a size of which is minutely larger than that of the bobbin to hold the bobbin; and

a horizontal support portion formed at the pins of the bobbin in parallel relation to an upper surface of the printed circuit board, for allowing the bobbin to be supported on the upper surface of the printed circuit board when the bobbin is inserted into the receiving hole.

2. (Original) The apparatus for fixing the bobbin to the printed circuit board for use in the transformer of claim 1, further comprising a fixing portion extending from the horizontal support portion in a perpendicular relation to the upper surface of the printed circuit board so that the pins are inserted into an opening formed in the printed circuit board.

3. (Previously Presented) The apparatus for fixing the bobbin to the printed circuit board for use in the transformer of claim 1, wherein a radially inner face of the receiving hole and a

radially outer face of the bobbin adjacent to the radially inner face of the receiving hole are perpendicular to the upper surface of the printed circuit board throughout a total thickness of the circuit board.

4. (Previously Presented) The apparatus for fixing the bobbin to the printed circuit board for use in the transformer of claim 1, wherein a plurality of horizontal support portions are formed, and the plurality of horizontal support portions support the entire weight of the bobbin on the printed circuit board.

5. (Previously Presented) The apparatus for fixing the bobbin to the printed circuit board for use in the transformer of claim 2, wherein a radially inner face of the receiving hole and a radially outer face of the bobbin adjacent to the radially inner face of the receiving hole are perpendicular to the upper surface of the printed circuit board throughout a total thickness of the circuit board.

6. (Previously Presented) The apparatus for fixing the bobbin to the printed circuit board for use in the transformer of claim 2, wherein a plurality of horizontal support portions are formed, and the plurality of horizontal support portions support the entire weight of the bobbin on the printed circuit board.

7. (New) A transformer, comprising:

a printed circuit board comprising a receiving hole and an upper surface;

a bobbin inserted into the receiving hole of the printed circuit board, the bobbin comprising:

a winding axis around which is wound a coil, the winding axis being perpendicular to the upper surface of the printed circuit board;

a lower portion at one end of the winding axis;

a plurality of pins connected to the lower portion, each pin comprising a horizontal support portion that extends in parallel contact with the upper surface of the printed circuit board to support the bobbin on the printed circuit board,

wherein a diameter of the receiving hole is minutely larger than a diameter of the portion of the bobbin inserted therein, to hold the bobbin.

8. (New) The transformer of claim 7, each pin further comprising a fixing portion extending from the horizontal support portion in a perpendicular relation to the upper surface of the printed circuit board to extend into an opening in the printed circuit board.

9. (New) The transformer of claim 7, wherein a radially inner face of the receiving hole and a radially outer face of the bobbin adjacent to the radially inner face of the receiving hole are perpendicular to the upper surface of the printed circuit board throughout a total thickness of the circuit board.

10. (New) The transformer of claim 7, wherein a plurality of pins with horizontal support portions are formed, and the plurality of horizontal support portions support the entire weight of the bobbin on the printed circuit board.